

CLAIMS

1. A product comprising a fibrous support and a hydrophilic and/or permeabilizing coating bonded over 5 at least part of an area of the support, characterized in that the coating comprises:

- a film covering at least part of the support,
- a hydrophilic and/or permeabilizing agent,
- optionally, a compatibilizer for the film and 10 for at least part of an area of the support, and
- optionally, a wetting agent, other than the hydrophilic and/or permeabilizing agent.

2. The product as claimed in the preceding claim, 15 characterized in that the hydrophilic and/or permeabilizing agent is included in the film.

3. The product as claimed in claim 1, characterized in that the hydrophilic and/or permeabilizing agent is 20 a layer of material covering at least part of the film.

4. The product as claimed in one of the preceding claims, characterized in that the bonding between the support and the film is durable in the presence of an 25 aqueous solution at a temperature of between 10°C and 50°C.

5. The product as claimed in one of the preceding claims, characterized in that the fibrous support is a 30 yarn, a fiber or a filament, a woven or nonwoven, or optionally flocked or tufted textile surface, or a paper.

6. The product as claimed in one of the preceding 35 claims, characterized in that the fibrous support comprises a synthetic polymer, a natural polymer or a derivative of a natural polymer, in the form of a fiber, yarn or filament.

7. The product as claimed in the preceding claim,
characterized in that the polymer of the support is a
thermoplastic polymer based on polypropylene or
5 polyethylene terephthalate, cellulose or a derivative,
or a mixture.

8. The product as claimed in the preceding claim,
characterized in that the support is a textile surface
10 comprising yarns, fibers or filaments based on
polypropylene, polyethylene terephthalate, cellulose or
a derivative, or a mixture of these yarns, fibers or
filaments.

15 9. The product as claimed in either of claims 7 and
8, characterized in that the support is a nonwoven
surface, preferably a nonwoven of polypropylene fibers
or a nonwoven of polypropylene fibers and of fibers of
cellulose or a derivative.

20 10. The product as claimed in one of the preceding
claims, characterized in that it is permeable to water
and in that the support, the coating and their bonding
are such that the surface tension of an aqueous
25 solution is not lowered by more than 50% after placing
the product in contact with the aqueous solution.

11. The product as claimed in one of the preceding
claims, characterized in that the hydrophilic and/or
30 permeabilizing agent is a mineral hydrophilic agent.

12. The product as claimed in the preceding claim,
characterized in that the mineral hydrophilic agent is:
- a dispersion of mineral particles included in the
35 film, optionally in an upper part of the film not
bonded to the support, or
- a layer of mineral material covering at least part of
the film.

13. The product as claimed in one of the preceding claims, characterized in that the hydrophilic and/or permeabilizing agent is a hydrophilic polymer.

5 14. The product as claimed in the preceding claim, characterized in that the hydrophilic polymer is a polyether silicone.

10 15. The product as claimed in the preceding claim, characterized in that the polyether silicone has the formula (I) below:

(I)

the end groups of the ethylene oxides (OE) or propylene oxides (OP) being groups OR,
15 in which:
OE means $-O-CH_2-CH_2-$
OP means $-O-CH_2-CH_2-CH_2-$
R represents a hydrogen atom or a linear or branched
20 alkyl radical containing from 1 to 22 carbon atoms and preferably from 1 to 4 carbon atoms, or an acetyl group,
x is a number between 5 and 50,
y is a number between 3 and 10,
25 e is a number between 10 and 30,
p is a number between 0 and 10,
it being understood that:
x/y is less than 10 and preferably less than or equal to 8,
30 e+p is less than 30 and preferably less than or equal to 20,

e/p is greater than 1 and preferably greater than or equal to 4, and
x+y is less than 60 and preferably less than 40.

5 16. The product as claimed in the preceding claim, characterized in that:

- x = 9.5, y = 3.5, e = 11.5, p = 2.5, and R represents a hydrogen atom;
- x = 14, y = 4, e = 17 and p = 1, and R represents H, 10 a hydrogen atom; or
- x = 48, y = 6, e = 15 and p = 5, and R represents a hydrogen atom.

15 17. The product as claimed in one of the preceding claims, characterized in that the film is a polymer in 15 the form of a film.

20 18. The product as claimed in one of the preceding claims, characterized in that the polymer in film form is a water-insoluble polymer obtained by polymerization 20 of monomers chosen from:

- vinyl esters and more particularly vinyl acetate;
- alkyl acrylates and methacrylates, the alkyl group of which contains from 1 to 10 carbon atoms, for example 25 methyl, ethyl, n-butyl or 2-ethylhexyl acrylates and methacrylates;
- vinylaromatic monomers, in particular styrene; these monomers may be copolymerized with each other or with other ethylenically copolymerizable unsaturated 30 monomers with vinyl acetate and/or acrylic esters and/or styrene, to form homopolymers, copolymers or terpolymers.

35 19. The product as claimed in claim 18, characterized in that the monomers that are copolymerizable with vinyl acetate and/or acrylic esters and/or styrene may be chosen from ethylene and olefins, for instance isobutene; vinyl esters of branched or unbranched, saturated monocarboxylic acids, containing from 1 to 12

carbon atoms, for instance vinyl propionate, vinyl "Versatate" (brand name for branched C₉-C₁₁ acid esters), vinyl pivalate or vinyl laurate; esters of unsaturated monocarboxylic or dicarboxylic acids

5 containing 3 to 6 carbon atoms with alkanols containing 1 to 10 carbon atoms, for instance methyl, ethyl, butyl or ethylhexyl maleates or fumarates; vinylaromatic monomers such as methylstyrenes or vinyltoluenes; vinyl halides such as vinyl chloride, vinylidene chloride and

10 diolefins, particularly butadiene; (meth)allylic esters of (meth)acrylic acid, (meth)allylic esters of maleic, fumaric and itaconic acid monoesters and diesters, and also alkene derivatives of acrylic and methacrylic acid amides, such as N-methallylmaleimide.

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20. The product as claimed in either of claims 18 and 19, characterized in that the water-insoluble polymer is obtained by polymerization of monomers chosen from alkyl acrylates and methacrylates whose alkyl group

20 contains from 1 to 10 carbon atoms, for example methyl, ethyl, n-butyl or 2-ethylhexyl acrylates and methacrylates.

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21. The product as claimed in one of the preceding claims, characterized in that the weight ratio between the film and the hydrophilic and/or permeabilizing agent is between 99.9/0.1 and 90/10 and preferably between 97/3 and 95/5.

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22. The product as claimed in one of the preceding claims, characterized in that the coating (dry matter)/support ratio is between 1% and 25%.

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23. The product as claimed in one of the preceding claims, included in a disposable absorbent product, preferably a baby diaper (nappy), a feminine hygiene product, or a comfort product for adult incontinence.

24. A process for preparing a product as claimed in one of the preceding claims, characterized in that it comprises the following steps:

5 a) optionally, exposing at least part of the surface of the support to a preparation treatment that promotes bonding between the coating and at least the treated part of the surface of the support,
b) formation of the coating according to one of the methods b1) or b2) below:

10 b1)

bla) applying to at least part of the surface of the support a coating composition comprising:

15 - at least one film-forming agent, in a liquid vector, forming a film after removal of the vector,
- a hydrophilic and/or permeabilizing agent,
- optionally, a compatibilizer for the film or the film-forming agent and for at least 20 part of the surface of the support,
- optionally, a wetting agent, other than the hydrophilic and/or permeabilizing agent, and then

25 b1b) removing the liquid vector to form a film; or

b2)

b2a) applying to at least part of the surface of the support a coating composition comprising:

30 - at least one film-forming agent, in a liquid vector, forming a film after removal of the vector,
- optionally, a compatibilizer for the film or the film-forming agent and for at least 35 part of the surface of the support,
- optionally, a wetting agent, other than the hydrophilic and/or permeabilizing agent, and then

b2b) removing at least part of the vector to form a film, and then

b2c) forming a layer of hydrophilic and/or permeabilizing mineral material covering at least part of the film.

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25. The process as claimed in claim 24, characterized in that the film-forming agent is a film-forming polymer.

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26. The process as claimed in the preceding claim, characterized in that the film-forming polymer is a polymer dissolved in an aqueous vector or in a solvent, or an aqueous dispersion of film-forming polymer
15 (latex).

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27. The use of the product as claimed in one of claims 1 to 23 in absorbent disposable products, or for absorbent disposable products.